FORM
MAR 1954

(20)

CLASSIFICATION C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT 50X1-HUM

CD NO. --

COUNTRY USSR

SUBJECT Scientific - Chemistry, industrial automation

DATE OF INFORMATION 1952

HOW PUBLISHED Bimonthly periodical

DATE DIST. 15 Aug 1955

WHERE PUBLISHED Moscow

NO. OF PAGES 3

DATE PUBLISHED Jul/Aug 1952

LANGUAGE Russian

SUPPLEMENT TO REPORT NO.

THIS IS UNEVALUATED INFORMATION

SOURCE Avtomatika i Telemekhanika. Vol 13, No 4, 1952, pp 491-492

MEETING ON AUTOMATION OF THE CHEMICAL INDUSTRY AT THE INSTITUTE OF AUTOMATICS AND TELEMECHANICS ACADEMY OF SCIENCES USSR

V. A. Silinskaya

A meeting on automation of the chemical industry was held at the Institute of Automatics and Telemechanics, Academy of Sciences USSR, on 26-30 June 1952. Approximately 200 representatives from plants, scientific research institutes, planning organizations, and the Ministry of Chemical Industry gathered to consider the most important questions and problems concerning automation of the chemical industry and to exchange work experiences.

Prof N. N. Shumilovskiy, Doctor of Technical Sciences, opened the meeting and disclosed its purposes in his opening address.

The work of the meeting was conducted along three basic lines.

1. Automation of technological processes in a number of chemical industries.

2. Theoretical work in research on the dynamics of industrial processes.

3. Work on the making of instruments for automatic control and regulation of processes in the chemical industry.

The following people presented reports on the automation of technological processes which were discussed: A. L. Rozenvasser (Ministry of Chemical Industry); Prof A. G. Amelinai, Doctor of Technical Sciences; A. M. Popovskiy, Candidate of Technical Sciences (Institute of Automatics and Telemechanics, Academy of Sciences USSR); S. V. Kuznetsov (State Institute for Projecting Basic Chemical Industrial Plants); G. M. Fialko, Candidate of Technical Sciences (Ural Scientific-Research Institute of Chemical Industry); V. I. Maksyuta (All- Union Institute of Soda Industry); and A. V. Uvarova (State Institute for Promoting the Synthetic Rubber Industry).

STATE		NAVY		NSRB		DISTRIBUTION						
ARMY		AIR		FBI								

The above reports indicate that the work on complex automation conducted at the institutes mentioned, and especially within the Glavkauchuk system, merited attention.

Covering theoretical work in research on dyamics of industrial processes, Ye. G. Dudnikov, Doctor of Technical Sciences (Institute of Automatics and Telemechanics, Academy of Sciences USSR), made a report on experimentally obtained methods for estimating optimum construction of regulating systems that function by dynamic characteristics. G. V. Bukhantsev, Candidate of Technical Sciences (All-Union Institute of Soda Industry), made a similar report, acquainting the members of the meeting with work on theoretical research on process dynamics and regulating systems used in the soda industry.

Several reports were made on work on making instruments for automatic control and regulation of processes. Prof V. A. Trapeznikov, Doctor of Technical Sciences (Institute of Automatics and Telemechanics, Academy of Sciences USSR), drew much attention with his report on the aggregate principle for designing systems of automatic devices based on single-type functions supplied by individual elements of the most complex systems of automatic control and regulation. Instruments of the aggregate system that were tested in the chemical industry indicated good qualities for exploitation.

N. Ya. Festa, chief of the Experimental Design Bureau of Automatics, Ministry of Chemical Industry, reported on the interesting work being done there. He demonstrated at the meeting samples of successful measuring instruments and devices for gas analysis, based on the utilization of physical and physicochemical methods of analysis, as well as instruments of the electropneumatic type constructed on the aggregate principle.

A. A. Shcherbakov, Candidate of Chemical Sciences, reported on new control and measuring instruments developed at the Ural Scientific-Research Institute of Chemical Industry and introduced into industry. Positive results were obtained at the institute in regard to creating apparatus for the measurement and regulation of sulfuric acid by the electrical-conductivity method.

L. F. Kulikovskiy, Doctor of Technical Sciences, representative of the Kaunasskov Polytechnic Institute, presented a report of work on the development of inductive and induction systems for measuring linear displacement and a number of electrical parameters, as well as direct-current photoelectric amplifiers.

The participants of the meeting discussed the work plan of the Institute of Automatics and Telemechanics for 1953 on the classification of automation of sulfuric-acid manufacture and approved it with only a few changes.

The wide exchange of ideas that resulted from hearing the reports indicated the great interest the participants had about the questions. The initiative of the Institute of Automatics and Telemechanics in calling the present meeting was indorsed; it was felt that it served as an important link in solving the problems of introducing automatics in the chemical industry, as set forth by the party and the government.

As a result of work done at the meeting, decisions were made concerning the positive and negative sides of work presented. Also, recommendations were made which should contribute toward broader development of work on the automation of industrial processes and toward the development of automation procedures in the chemical industry.

Noting the significant advances achieved in the field of automation of industrial processes for sulfuric acid, soda, superphosphate, and synthetic rubber, as well as in the development of measuring and regulating apparatus,

the meeting concluded that raising the level of automation still further and eliminating shortcomings still present are necessary.

It was agreed at the meeting that the Ministry of Chemical Industry should supply the manufacturing establishments in the chemical industry with control and measuring instruments and regulators that have been accepted by the instrument-making industry. It was also felt that the Ministry of Chemical Industry should organize a special instrument-making base, since the lack of one retards the making of special instruments. The Ministry of Chemical Industry should also establish some facility e.g., a trust, to coordinate scientific activity of the branches of the institutes and design bureaus (for making new instruments and automatic devices) and organizations in the institute laboratories for industrial automation.

The meeting recommended the following to the Institute of Automatics and Telemechanics, Academy of Sciences USSR:

1. Organize as quickly as possible the systematization and generalization of works in the field of automation of industrial processes being carried out at the branches of the institutes of the chemical industry.

2. Concurrently with the branch institutes and the Experimental Design Bureau of Automatics to organize:

a. Systematic analytical and experimental investigation of the dynamics of regulating procedures for typical technological processes in the chemical industry and typical individual aggregates, according to a single general plan; also, to investigate systems of automatic regulation using models based on works already being carried out at the Institute of Automatics and Telemechanics;

b. Work for the establishment of a scientific classification for regulated processes in the chemical industry and also work for the establishment of a scientific basis for determining the technical-economical effectiveness of automation and for technical-economical investigation of automatic processes in the chemical industry.

The members of the meeting approved the organization of a Commission on Automation and Telemechanization of Industrial Processes in the Institute of Automatics and Telemechanics, Academy of Sciences USSR. Considering this a timely measure and approving of the basic course of the work assigned to the commission, the meeting expressed the desire that the commission organize sections on automation of the chemical industry.

The members of the meeting expressed a desire to confer on automation of the chemical industry every year, thus broadening their program in all aspects of production in the chemical industry, and discussing fundamental work accomplished in the previous year and the perspectives assigned for the following year.

- E N D -